

Remarks

Claims 1-22 are pending in the application.

Claims 1, 2, 4-9, and 13-21 stand rejected.

Claims 3, 10-12, and 22 stand objected.

Claims 1 and 21 have been amended.

Continued appreciation is expressed for the indication of allowability of claims 3, 10-12, and 22. However, at this time the applicants choose to defer amendment of these claims until they have had the opportunity to traverse the Examiner's rejections.

Figure 1 has been amended to correct a labeling error that was discovered upon preparation of this response. Labels 140 and 141 of the original drawings were inadvertently omitted in the formal drawings that were submitted in the May 31, 2005 response and have been added by amendment herein. No new matter has been added by this amendment.

Although applicants believe the claims already claim the specific order of "identifying one of the first and second rings as being associated with the shortest path," and then "determining if the identified one of the first and second rings is more congested than the other," applicants have amended claims 1 and 21 to explicitly claim this limitation. Specifically, claims 1 and 21 have been amended to clarify that congestion determination is performed in response to identifying the ring with the shortest path.

Rejection of Claims under 35 U.S.C. § 103

Claims 1, 2, 4-6, 13-16, 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yim, U.S. Patent Application Publication No. 2003/0206527 ("Yim"), in view of Hluchyj et al., U.S. Patent No. 5,426,640 ("Hluchyj"). The applicants respectfully request withdrawal of these rejections in view of the following arguments.

Yim and Hluchyj taken alone or in combination neither teach nor suggest a method including:

determining a shortest path to a destination node including identifying one of the first and second rings as being associated with the shortest path; and

in response to identifying one of the first and second rings as being associated with the shortest path to the destination node, determining if the identified one of the first and second rings is more congested than the other of the first and second rings using the transit delay data;

as required by the amended independent claim 1, and generally required by independent claims 20 and 21.

Regarding the claimed “determining if the identified one of the first and second rings is more congested . . . ,” the Examiner continues to refer to paragraph 0021 of Yim which states:

[0021] The message processors may perform their selection on the basis of information obtained from a look-up table. The look-up table may contain information about the number of ring links along which a data message has to travel along each ring between the nodes to reach its destination so that the shortest route for the data message can be determined. The look-up table may also contain information about the data flow rate or traffic loading on each ring. Thus when one ring contains a lot of traffic and is congested, another ring may be selected. The look-up table is preferably dynamically updated for each new data message to be sent. For this purpose, counting means may be provided for counting the number of messages queued for transmission at a node or nodes of the system.

Thus, the cited portion of Yim discloses using ring link information to determine a shortest route for ring selection, and also discloses using ring congestion information for ring selection. However, Yim neither teaches nor suggests first identifying a ring based on a shortest path, and then in response to identifying the ring associated with the shortest path, determining if *the identified ring* is more congested than another ring. The cited portion of Yim simply discloses both types of analysis, but not use of the analysis together, and particularly not use together in accordance with the applicants’ claims.

Further reference to Yim emphasizes this point. Paragraphs 0052-0054, and 0060 describe how Yim uses ring link and traffic loading information different than as claimed by applicants:

[0052] Node Cost (N_c), being the number of ring links a message has to pass through to reach the destination node;

[0053] Traffic Loading (T_{ld}), being the number of messages queued for transmission;

[0054] Combined Cost (C_c), being the sum of N_c and T_{ld} ;

[0060] When a message arrives at step 200, the source address and destination address are set to S_n and E_n respectively, at step 202, to initiate the search of the dynamic table at step 204. A comparison is then performed at 206 to see if the combined cost, i.e. $C_c = N_c + T_{ld}$, has exceeded the limit of $TL_m + N_c$. If it has exceeded the limit the message is rejected at 208. For example, if the traffic loading T_{ld} exceeds the maximum traffic load TL_m , when a new message is to be transmitted, that message is rejected. If it does not exceed the limit a decision is made at 210 as to whether all entries returned from the dynamic table have the same combined cost, C_c . If they do have the same C_c , the traffic balancing concept is applied wherein a comparison is made to see if the Ring Identity, R_{id} , equals the Next Ring Used, NR_u , at 212. If it is the same, then that ring is used at 214, and for all entries returned, the traffic loading of that same ring is updated by incrementing the value of T_{ld} by 1, at 216. If R_{id} does not equal NR_u then the next ring used is updated by incrementing the value of NR_{ld} by 1 at 218. This will also occur for those returned entries that had $R_{id} = NR_u$. If the next ring used exceeds the total ring R_t at 220, the next ring used will be set to 1 at 222 and the process ends at 224. If the next ring used does not exceed R_t the process is stopped at 224.

As demonstrated in these paragraphs, Yim teaches using the *combined* node cost and traffic loading in aggregate to make ring selection decisions. Yim neither teaches nor suggests the applicants' claimed identifying a ring based on a shortest path, and then determining if the identified ring is more congested than another ring. In fact, Yim fails to teach or suggest making ring selection based on a shortest path determination, as set out in the applicants' claims. Again, Yim simply aggregates various cost factors (e.g., N_c and T_{ld}) into a single value that is used to make a ring selection.

In response to similar arguments presented by the applicants in their Response of September 1, 2005, the Examiner states:

On pages 3 and 4 Applicants argue that Yim neither teaches nor suggests first identifying a ring based on a shortest path, and then determining if the identified ring is more congested than another ring. Examiner respectfully disagrees. Yim clearly discloses identifying one ring based on a shortest path, and then selecting another ring if the one ring is congested (paragraph [0021]). (Office Action of September 23, 2005, p. 8, no. 4)

The Examiner merely restates the previous generalization with respect to paragraph 0021 of Yim. The Examiner's cursory treatment of applicant's central argument with respect to Yim fails to address applicants' specifically stated position. Applicants emphasize that Yim fails to teach or suggest two *related* operations: (1) first determining a shortest path to a destination node including identifying one of the first and second rings as being associated with the shortest path, and then (2) in response to identifying one of the first and second rings as being associated with the shortest path to the destination node, determining if the *identified one of the first and second rings* is more congested than the other of the first and second rings using the transit delay data. The Examiner provides no substantive response to the applicants' argument. As noted in detail above, Yim fails to teach or suggest using the two types of analysis (shortest path and congestion) in order, let alone in the manner required by the applicants' claims. As Yim, paragraph [0021] fails to teach or disclose applicants' claim 1, applicants urge the Examiner to withdraw the 35 U.S.C. § 103(a) rejection of claim 1 as being unpatentable over Yim, in view of Hluchyj.

The amended claim explicitly includes an operation where one of the first and the second rings is identified as being associated with the shortest path, and, in response to identifying this path, determining if the identified ring is more congested than the other. The applicants respectfully submit both the amended claim, and more importantly the argument presented in connection with the claim that the claimed limitations are not taught or disclosed by the combination of Yim and Hluchyj.

The Examiner refers to Hluchyj regarding the use of transit delay data, and goes on to state that "it would have been obvious to one having ordinary skill in the art . . . to implement the teaching of Hluchyj in receiving a packet containing congestion level by measuring the depth of transit queues into Yim so that congested level information contained in a packet would be used in selecting the other ring with less congestion for

routing a packet and thereby reduce network congestion and improve network utilization.” Office Action of September 23, 2005, p. 3, bottom to p.4, top. The applicants continue to submit that the Examiner has failed to establish a *prima facie* case of obviousness. In addition to the claim elements not taught or suggested by the cited references as described above, the Examiner has not shown that there is some suggestion or motivation to combine Yim and Hluchyj, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

Neither reference suggests such a combination. Moreover, the applicants respectfully submit that the Examiner has failed to explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art *would have suggested the combination*, as required by, for example, *In re Rouffet*, 47 USPQ2d 1453 (Fed. Cir. 1998). The applicants also note that the purported motivation to combine, i.e., “so that congested level information contained in a packet would be used in selecting the other ring,” would not motivate one of ordinary skill in the art to combine the two references because Yim alone already teaches using congestion information to select a ring, as noted in the Examiner’s reference to Yim’s paragraph 0021. Thus, one having ordinary skill in the art would not be motivated to look beyond Yim itself.

In response to similar arguments presented by the applicants in their Response of September 1, 2005, the Examiner states:

Examiner relied on Hluchyj in utilizing transit delay data as a mean of indicating congestion level. (Office Action of September 23, 2005, pp. 8-9, no. 4)

Again, the Examiner misapprehends the nature of the applicant’s argument. At issue is not the claim limitation for which Hluchyj is relied upon, but rather the *justification presented by the Examiner in combining* Yim and Hluchyj. The Examiner’s purported motivation or suggestion to combine the references is “so that congested level information contained in a packet would be used in selecting the other ring.” However, the applicants have pointed out that (and the Examiner has not refuted these points): (1) the references themselves do not provide this motivation, (2) the Examiner points to no knowledge generally available to one of ordinary skill in the art justifying the combination, and (3) one of ordinary skill would *not* be motivated to combine the two

references because Yim alone already teaches using congestion information to select a ring, as noted in the Examiner's reference to Yim's paragraph 0021, i.e., there is no need to look beyond Yim to satisfy the Examiner's stated motivation.

Further, even if Yim were to be combined with Hluchyj, as discussed above, the claimed limitations are not taught or disclosed.

Accordingly, the applicants respectfully submit that independent claims 1, 20, and 21 are allowable over Yim and Hluchyj taken alone or in combination. Claims 2-19 depend from claim 1 and are allowable for at least this reason. Claim 22 depends from claim 20 and is allowable for at least this reason.

Claims 7-9, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yim in view of Hluchyj, and further in view of Wilson, U.S. Patent Application Publication No. 2001/0032269 (Wilson). The applicants respectfully traverse these rejections.

As shown with regard to the Yim/Hluchyj combination, all elements of claims 7-9, 17, and 18 are not taught or disclosed for at least the reason that claims 7, 9, 17, and 18 contain at least the same limitations as their independent base claim. Wilson is cited in an attempt to overcome additional transit delay deficiencies of Yim that were introduced by the limitations of dependent claims 7, 9, 17, and 18. The Office Action does not address the deficiencies discussed with regard to the Yim/Hluchyj combination. Further, even if (without admitting such) the Yim/Hluchyj/Wilson combination disclosed all elements of the applicants' claims 7, 9, 17, and 18, there is no appropriate motivation for the combination.

Applicants wish to emphasize that the Examiner has failed to show an unrebutted *prima facie* case of obviousness. No appropriate suggestion has been alleged for combining the cited references. The showing of a suggestion, teaching, or motivation to combine prior teachings "must be clear and particular Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence'." *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an

initial suggestion to make the combination. The only suggestion provided for the particular claimed combination is Applicants' disclosure, which is improper hindsight. Thus, the § 103 rejection of claims 7, 9, 17, and 18 should be withdrawn if for this reason only.

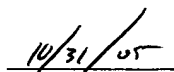
For at least the above reasons, the applicants urge the Examiner to withdraw the 35 U.S.C. § 103(a) rejection of claims 7-9, 17 and 18 as being unpatentable over Yim in view of Hluchyj, and further in view of Wilson.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450, on October 31, 2005.


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Date of Signature

Respectfully submitted,



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AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 1. This sheet replaces the original sheet including Fig. 1. Fig. 1 has been amended to conform more clearly with its corresponding detailed description.

Attachment: Replacement Sheet
Annotated Sheet